

The Structure of Service Coordination Teams: An Empirical Study

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This study was supported by a grant from the Comprehensive Community Mental Health Services for Children and Families Program of the Center for Mental Health Services, Substance Abuse Service Administration (Grant No. 6 HSS SM52910) to Marion County Health and Hospital Corporation and Choices, Inc.

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Research Questions:

- To take an empirical look at child and family team structures in a system of care
- To examine the relationship between structure and outcome for the young people who participate.

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Eligibility Criteria for the Dawn Project

- Be between the ages of 5 and 17
- In or at risk of residential treatment
- Involved in 2 or more child-serving agencies
- Have a DSM-IV diagnosable mental illness
- Have a designation of SED

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Data Sources for the Study

- Data collected as part of the Dawn Project Evaluation Study, an ongoing study that includes both in-depth, longitudinal interviews with families and youth enrolled in the project.
- Clinical and service-related information available through the Dawn Project's electronic information management system, The Clinical Manager.

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Data Coded

- Demographic characteristics
- Referral source
- Final program disposition
- Team makeup

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Final Disposition Coding

- Discharge due to the young person and family meeting the team-established treatment goals (*successful completion*)
- Discharge due to any other reason (*unsuccessful completion*).

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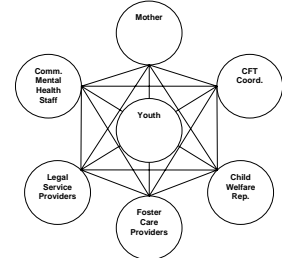
Team Member Role Categories

- Mother (includes adoptive, foster, step)
- Father (includes adoptive, foster, step)
- Youth
- Grandparent
- Other Family Member
- Non-kin Supports (friends, ministers, etc.)
- Dawn Project Service Coordinator
- Child Welfare Rep.
- Juvenile Justice Rep.
- Education Staff
- Community-Based Mental Health Staff
- Residential Treatment Provider
- Mentoring Services Staff
- Foster Care Agency Staff
- Legal Representative.

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Structure of Cluster 1 (N = 83)

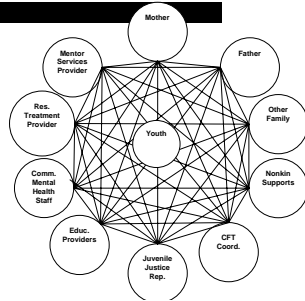
- 85.54% Successful Completion
- 57.83% Non-White
- 61.45% Male
- 96.39% from Child Welfare
- 78.3% Disruptive Dx
- 18.1% Mood/Anxiety Dx
- 3.6% Other Dx
- 12.46 Years Old at Enrollment



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Structure of Cluster 2 (N = 54)

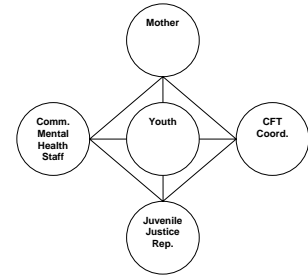
- 57.41% Successful Completion
- 62.96% Non-White
- 70.37% Male
- 62.96% from Juvenile Justice
- 87.0% Disruptive Dx
- 9.3% Mood/Anxiety Dx
- 3.7% Other Dx
- 12.72 Years Old at Enrollment



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Structure of Cluster 3 (N = 70)

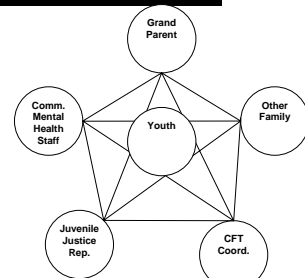
- 50.00% Successful Completion
- 51.43% Non-White
- 72.86% Male
- 82.86% from Juvenile Justice
- 82.9% Disruptive Dx
- 1.0% Mood/Anxiety Dx
- 7.1% Other Dx
- 13.47 Years Old at Enrollment



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Structure of Cluster 4 (N = 32)

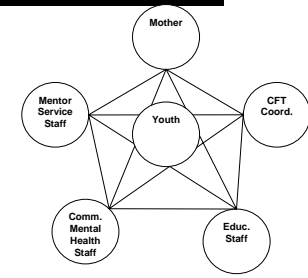
- 59.38% Successful Completion
- 65.63% Non-White
- 59.38% Male
- 50.00% from Juvenile Justice
- 81.3% Disruptive Dx
- 2.3% Mood/Anxiety Dx
- 0.0% Other Dx
- 13.69 Years Old at Enrollment



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Structure of Cluster 5 (N = 60)

- 63.33% Successful Completion
- 55.00% Non-White
- 85.00% Male
- 51.67% from Education
- 78.3% Disruptive Dx
- 18.3% Mood/Anxiety Dx
- 3.3% Other Dx
- 12.08 Years Old at Enrollment



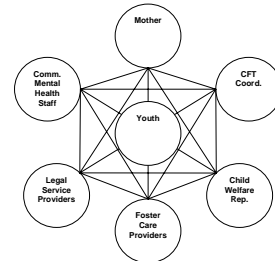
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Logistic Regression Predicting Outcome in the Dawn Project

- Young people with higher severity scores on the CBCL were less likely to leave the Dawn Project successfully.
- Young people from Juvenile Justice were less likely to leave the Dawn Project successfully.
- Young people in Cluster 1 were more likely to leave the Dawn Project successfully.

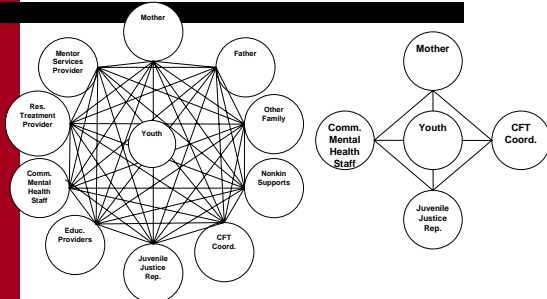
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Typical Structure of Cluster 1



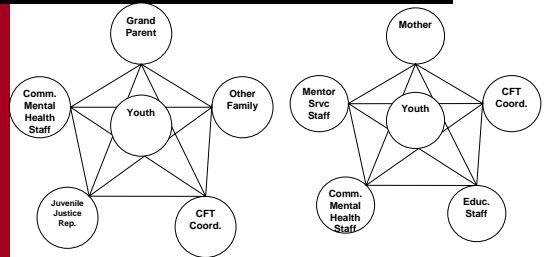
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Typical Structure of Clusters 2 & 3



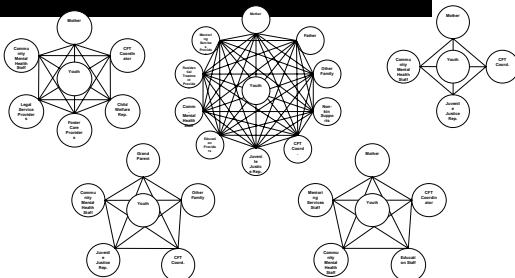
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Typical Structure of Clusters 4 & 5



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Typical Structures of all Clusters



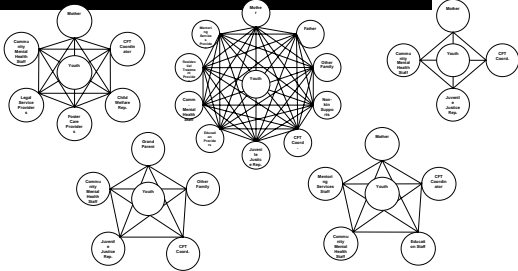
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Study Limitations

- Ability to identify and compare team types is limited by our relatively small sample size
- All of our data come from one system-of-care that serves a single geographic area
- Exclusive focus on the structure of teams as defined by the formal roles of individuals on each team

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Typical Structures of all Clusters



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Service Coordination Team Composition and Child Outcomes: An Exploratory Analysis

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Background

- Preliminary studies suggest that use of service coordination with youth with SED is linked to improved youth functioning, system outcomes, and parent satisfaction.
- What is it about service coordination teams themselves that may impact outcomes among youth?

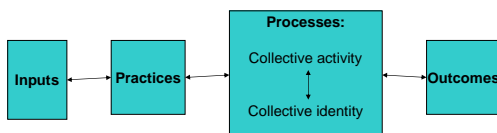
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Effectiveness of Service Coordination Teams

- Group characteristics
- Individual member characteristics
- Group level functioning
- Level of involvement with youth, family, informal supports

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Walker & Schutte Model of Effectiveness (2004)



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Dawn Project Evaluation Study

- What are the most commonly occurring service coordination team structures?
- Across all service coordination team structures, was the presence of particular group member roles significantly related to successful program completion?

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Methodology

- Study Design: ongoing, longitudinal
- Data source: Dawn Project Evaluation Study electronic charting system, the Clinical Manager
- Sample: 230 discharged young people for whom service coordination team meeting, outcome, and clinical information were available.

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Outcome Variable

- Program disposition upon discharge: dichotomously coded as a young person and family having:
 - Met the team-established goals (*successful completion*)
 - Not met the goals, for any reason (*unsuccessful completion*)

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Cumulative Team Composition

- Data source: team meeting minutes entered into the Clinical Manager
- Research assistants coded from the minutes each participant's:
 - Name
 - Role on team
 - Agency affiliation
 - Gender

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Role Participation

- Role participation was determined by:
 - Calculating the total number of meetings each unique team member was eligible to attend
 - Calculating the total number of meetings each unique team member actually attended
 - Dividing the number of meetings attended by the number of meetings eligible
 - Calculating an average participation rate by summing the participation rates for the role and dividing by the total number of team members in the given role

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Clinical Symptomatology

- Data source: Total Problems Scale of the Child Behavior Checklist-Parent Version (CBCL; Achenbach, 1981)

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Analysis

- Three logistic regression models
- All models contained:
 - Youth demographic characteristics
 - Youth symptom severity at baseline
 - System referral source
 - Team member/role presence

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Analysis (cont'd)

- Team member/role presence was modeled in three ways and examined in three separate models:
 - Presence or absence of role
 - Total number of team members occupying each role
 - Average participation on team of each role (natural log transformation)

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Results of Modeling Role Presence

- Successful program completion was predicted by:
 - Having fewer behavioral symptoms at program entry
 - Having not been referred from the educational system
 - Having service coordination team member participation in specific roles:
 - Presence of father and educational staff
 - Absence of juvenile justice and mentoring services staff

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Results of Modeling Number of Role Occupants

- Successful program completion was predicted by:
 - Having fewer behavioral symptoms at program entry
 - Having not been referred from the educational or juvenile justice systems
 - Having more occupants in the educational staff role

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Results of Modeling Average Participation Rate of Role

- Successful program completion was predicted by:
 - Having fewer behavioral symptoms at program entry
 - Having not been referred from the educational system
 - Having more participation from the educational staff role and less participation from the juvenile justice, residential treatment, and mentoring services staff roles.

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Discussion

- Across the three models, the following factors are associated with successful program completion:
 - Slightly fewer clinical symptoms at baseline
 - Young person not referred from educational system
 - Educational staff participate in service coordination team
 - Role presence stronger than number or participation

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Impact of Role Presence

- + Father
- + Education staff
- Juvenile justice staff
- Mentoring services staff

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Limitations

- These models describe a subset of youth from one system of care site
- Absence of a control for level of team role relevance
- Absence of measures of participation level for each team member
- Cumulative rather than transactional view of team

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Questions Raised

- What are the nature and mechanisms of team member role contribution to goal attainment?
- What role interactions contribute or detract from goal attainment? How? Under what conditions?
- How does variation in role participation intensity and consistency over time impact goal attainment?
- How might team roles and functions vary across youth characteristics? (e.g., what professional roles are relevant?)

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Potential Clinical Implications

- Improving outcomes for young persons through clinical practices based on greater understanding of the structural and functional characteristics of effective service coordination teams.
- Better guidelines for matching team composition to client circumstances and for making team changes as circumstances change.

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HANDOUT

The Structure of Service Coordination Teams: An Empirical Study

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Lisa Russell

ETR Associates, Scotts Valley, CA

This study was supported by a grant from the Comprehensive Community Mental Health Services for Children and Families Program of the Center for Mental Health Services, Substance Abuse Service Administration (Grant No. 6 HS5 SM52910) to Marion County Health and Hospital Corporation and Choices, Inc.

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Paper presented at the 18th Annual Research and Training Center Conference on Children's Mental Health, March 6th – 9th, Tampa, FL

Table 1. Demographic Composition of Total Sample (N = 299)

Demographic	N	(%)
Race		
Caucasian	127	(42.5)
African-American/Minority	172	(57.5)
Gender		
Male	210	(70.2)
Female	89	(29.8)
Referral Source		
Child Welfare	110	(36.8)
Juvenile Justice	118	(39.5)
Education	43	(14.4)
Mental Health	28	(9.3)
Diagnostic Category		
Disruptive Disorder	243	(81.3)
Mood/Anxiety Disorder	44	(14.7)
Other Disorder	12	(4.0)
Outcome		
Met Goals	194	(64.9)
Other Reason	105	(35.1)
	M	(SD)
Age at Enrollment	12.80	(2.7)

Table 3. Demographic Composition of Clusters

Variable	Cluster 1 (N = 83)		Cluster 2 (N = 54)		Cluster 3 (N = 70)		Cluster 4 (N = 32)		Cluster 5 (N = 60)		χ^2	p
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)		
Outcome											24.17	0.000 [†]
Met Goals	71	(85.54)	31	(57.41)	35	(50.00)	19	(59.38)	38	(63.33)		
Did Not Meet Goals	12	(14.46)	23	(42.59)	35	(50.00)	13	(40.63)	22	(36.67)		
Race											2.74	0.603
White	35	(42.17)	20	(37.04)	34	(48.57)	11	(34.38)	27	(45.00)		
Non-White	48	(57.83)	34	(62.96)	36	(51.43)	21	(65.63)	33	(55.00)		
Gender											11.36	0.023*
Male	51	(61.45)	38	(70.37)	51	(72.86)	19	(59.38)	51	(85.00)		
Female	32	(38.55)	16	(29.63)	19	(27.14)	13	(40.63)	9	(15.00)		
Diagnostic Category												
Disruptive	65	(78.30)	47	(87.00)	58	(82.90)	26	(81.30)	47	(78.30)	2.11	0.715
Mood/Anxiety	15	(18.10)	5	(9.30)	7	(1.00)	6	(2.30)	11	(18.30)	4.31	0.366
Other	3	(3.60)	2	(3.70)	5	(7.10)	0	(0.00)	2	(3.30)	3.24	0.519
Referral Source												
Child Welfare	80	(96.39)	7	(12.96)	2	(2.86)	13	(40.63)	8	(13.33)	189.01	0.000 [†]
Juvenile Justice	3	(3.61)	34	(62.96)	58	(82.86)	16	(50.00)	7	(11.67)	133.20	0.000 [†]
Education	0	(0.00)	9	(16.67)	3	(4.29)	0	(0.00)	31	(51.67)	93.08	0.000 [†]
Mental Health	0	(0.00)	4	(7.41)	7	(10.00)	3	(9.38)	14	(23.33)	22.64	0.000 [†]
Age at Enrollment	M	(SD)	M	(SD)	M	(SD)	M	(SD)	M	(SD)	F	p
	12.46	(2.98)	12.72	(2.11)	13.47	(2.11)	13.69	(2.14)	12.08	(3.16)	3.59	0.007 [†]

*p ≤ .05; [†]p ≤ .01; [‡]p ≤ .001

Table 4. Logistic regression predicting outcome in the Dawn Project.

	O.R.	p
Youth Demographics		
Race	0.84	0.598
Gender	1.22	0.578
Age at Enrollment	0.89	0.076
Diagnostic Group ¹		
Disruptive Disorders	0.32	0.324
Mood/Anxiety Disorders	0.33	0.366
CBCL Total Problems Score	0.97	0.031*
Referral Source ²		
Child Welfare	0.28	0.096
Juvenile Justice	0.20	0.012*
Education	0.42	0.226
Cluster ³		
Cluster 1	4.78	0.026*
Cluster 2	1.33	0.595
Cluster 3	1.11	0.851
Cluster 4	1.43	0.583

¹Other Diagnoses is the comparison category

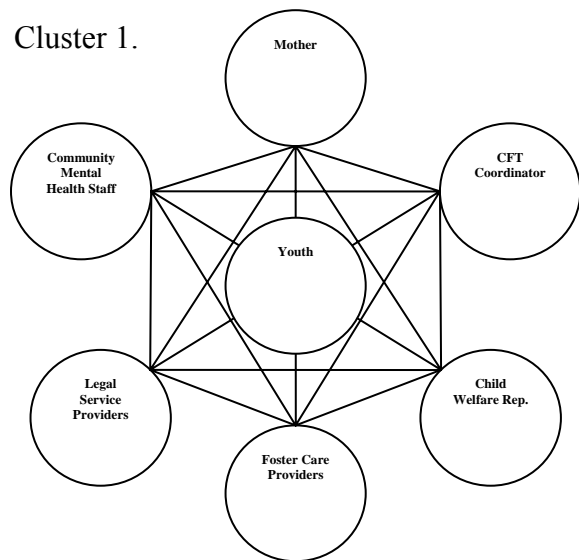
²Mental Health is the comparison category

³Cluster 5 is the comparison category

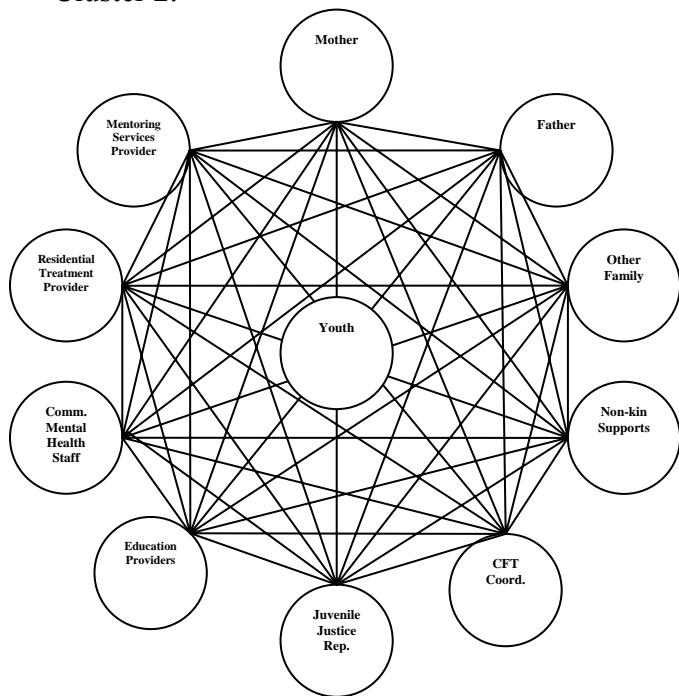
*p≤.05; **p≤.01; ***p≤.001

Figure 1. Network diagrams of service coordination team structures.

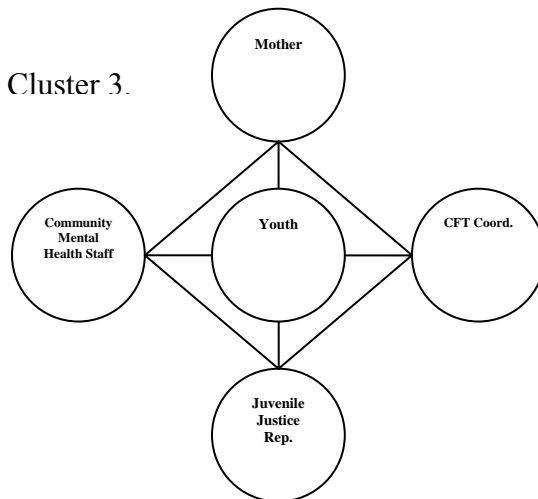
Cluster 1.



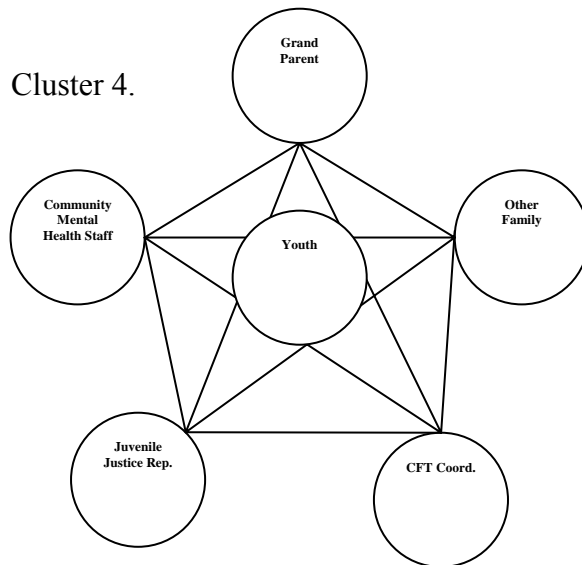
Cluster 2.



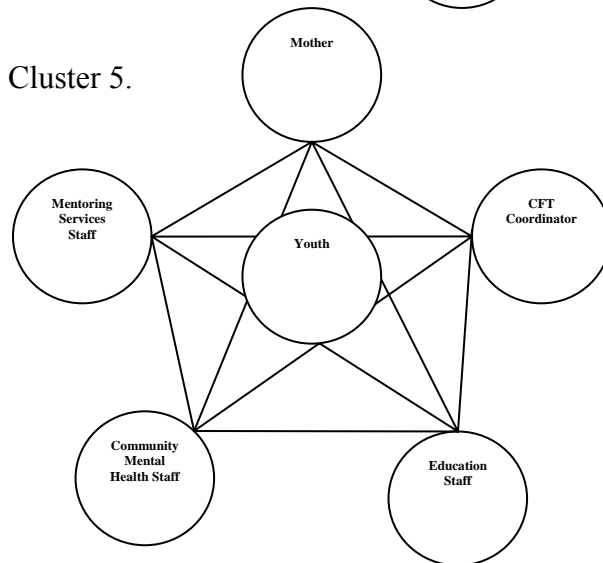
Cluster 3.



Cluster 4.



Cluster 5.



HANDOUT

Service Coordination Team Composition and Child Outcomes: An Exploratory Analysis

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Paper presented at the 18th Annual Research and Training Center Conference on Children's Mental Health,

March 6th -9th, 2005 – Tampa, FL

Table 1. Demographic Comparisons Between Those Youth In and Not in the Analysis Sample

Variables	In Analysis Sample (n = 230)		Not in Analysis Sample (n = 69)		χ^2	p
	N	(%)	n	(%)		
Race					0.0370	0.848
Caucasian	97	(42.17)	30	(43.48)		
African-American/Biracial	133	(57.82)	39	(56.52)		
Gender					1.128	0.288
Male	158	(68.70)	52	(75.36)		
Female	72	(31.30)	17	(24.64)		
Referral Source						
Child Welfare	80	(34.78)	30	(43.48)	1.726	0.189
Juvenile Justice	94	(40.87)	24	(34.78)	0.823	0.364
Education	32	(13.91)	11	(15.94)	0.178	0.674
Mental Health	24	(10.43)	4	(5.80)	1.345	0.246
Diagnoses						
Mood/Anxiety	32	(13.91)	12	(17.39)	0.512	0.474
Disruptive	190	(82.61)	53	(76.81)	1.172	0.279
Other	8	(3.48)	4	(5.80)	0.741	0.389
Outcome					9.590	0.002***
Met Goals	160	(69.57)	34	(49.28)		
Did Not Meet Goals	70	(30.43)	35	(50.72)		
	M	(SD)	M	(SD)	t	p
Age At Enrollment	12.56	(2.69)	13.58	(2.38)	2.842	0.002***
Months Enrolled	12.42	(6.31)	10.38	(6.46)	-2.346	0.010**

Table 2. Logistic Regression Predicting Outcome in the Dawn Project.

	Presence of Role on Team O.R.	Number of People who Held Role O.R.	Average Participation Rate of Role O.R.
Youth Demographics			
Race	1.35	1.04	1.34
Gender	1.04	1.13	1.05
Age at Enrollment	0.93	0.86	0.93
Diagnostic Group ¹			
Disruptive Disorders	0.20	0.22	0.23
Mood/Anxiety Disorders	0.13	0.25	0.16
CBCL Total Problems Score	0.96*	0.96*	0.96*
Referral Source ²			
Child Welfare	0.52	0.40	0.70
Juvenile Justice	0.27	0.24*	0.33
Education	0.19*	0.16*	0.20*
Team Member			
Mother	0.44	0.56	0.85
Father	2.26*	1.94	1.19
Grand Parent	0.68	0.72	1.24
Other Family	1.05	1.23	0.91
Youth	2.38	2.71	1.04
Nonkin Supports	1.93	1.45	1.09
Juvenile Justice Representatives	0.35*	0.79	0.76*
Education Staff	2.38*	1.22*	1.29*
Child Welfare Representatives	1.06	1.94	0.97
Community Mental Health Providers	1.10	0.87	0.96
Residential Treatment Staff	0.60	1.00	0.83*
Mentoring Services Staff	0.36*	0.98	0.81*
Fostercare Service Providers	1.37	0.96	1.17
Legal Representatives	1.19	0.97	1.04

¹Other Diagnoses is the comparison category

²Mental Health is the comparison category

*p≤.05; **p≤.01; ***p≤.001